AMENDMENTS TO THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 22, 26, 27, and 34 to read as follows:

1. (CURRENTLY AMENDED) A projection system comprising:

light emitting units emitting light beams of different wavelengths;

optical fibers disposed between the light emitting units and a collimating lens to respectively transmit the light beams;

a scrolling unit having at least two discrete~~spirally arranged~~ cylinder ~~lens cells~~ lenses spirally arranged to form at least two spiraling cells respectively corresponding to the at least two discrete cylinder lenses on a single disk which separate the light beams into color beams and scroll the color beams when the scrolling unit is rotated;

a light valve that receives the color beams transmitted by the scrolling unit and forms a color image by turning pixels on or off according to an input image signal;

first and second fly-eye lenses which receive the color beams transmitted by the scrolling unit, diverge the color beams, and transmit the color beams to the light valve;

a first cylinder lens disposed between the light emitting units and the scrolling unit to control a width of the light beams emitted by the light emitting units; and

a second cylinder lens paired with the first cylinder lens and disposed between the scrolling unit and the second fly-eye lens to collimate the color beams transmitted by the scrolling unit, the first and second cylinder lenses cooperating to control the width of the light beams incident upon the scrolling unit and the color beams on the first fly-eye lens.

2. (CANCELLED)

3. (ORIGINAL) The projection system of claim 2, further comprising a relay lens that is disposed on a light path between the second fly-eye lens and the light valve to focus the color beams transmitted by the second fly-eye lens onto respective color areas of the light valve.

4. (ORIGINAL) The projection system of claim 3, wherein the light emitting units are one of an LED, a laser diode, an organic EL, and an FED.

5. (CANCELLED)

6. (ORIGINAL) The projection system of claim 1, further comprising a collimating lens that collimates the light beams emitted from the light emitting units.

7. (CANCELLED)

8. (CANCELLED)

9. (ORIGINAL) The projection system of claim 1, wherein the light emitting units are one of an LED, a laser diode, an organic EL and an FED.

10. (PREVIOUSLY PRESENTED) The projection system of claim 2, wherein the first and second fly-eye lenses have a plurality of 2 dimensionally arranged lens cells.

11. (ORIGINAL) The projection system of claim 2, wherein the first fly-eye lens is disposed at a focal plane of the scrolling unit and the color beams transmitted from the scrolling unit are focused on the first fly-eye lens.

12. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit has at least two cylinder lens cells.

13. (PREVIOUSLY PRESENTED) The projection system of claim 1, wherein the scrolling unit has a number of cylinder lens cells equal to a number of the light emitting units.

14. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit has 3 cylinder lens cells.

15. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit is rotated at a constant speed in a direction.

16. (ORIGINAL) The projection system of claim 1, wherein a scrolling speed of the scrolling unit is synchronized with an operating frequency of the light valve.

17. (ORIGINAL) The projection system of claim 16, wherein an increase in one of the number of cylinder lens cells and the rotational speed of the scrolling unit increases the scrolling speed.

18. (ORIGINAL) The projection system of claim 16, wherein a decrease in one of the number of cylinder lens cells and the rotational speed of the scrolling unit decreases the scrolling speed.

19. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit is a single optical element.

20. (ORIGINAL) The projection system of claim 1, wherein the light emitting units emit three color beams, one color beam having a wavelength corresponding to red, one color beam having a wavelength corresponding to green, and one color beam corresponding to blue.

21. (PREVIOUSLY PRESENTED) The projection system of claim 2, wherein the first fly-eye lens adjusts the width of the light beams so as to match the shape of the cylinder lens cells and thereby minimize light loss.

22. (CURRENTLY AMENDED) A method of projecting an image, comprising:

emitting light beams of different wavelengths;

transmitting the light beams respectively via optical fibers disposed between light emitting units and a collimating lens;

separating the emitted light beams into a plurality of color beams and scrolling the color beams by rotating an optical element ~~having spiral lens cells on a disk and~~ arranged so that rotation thereof simulates linear movement of the optical element, the optical element having at least two discrete cylinder lenses spirally arranged to form at least two spiraling cells respectively corresponding to the at least two discrete cylinder lenses cells on a single disk;

focusing the color beams onto a light valve so as to form color bars corresponding to each of the colors in the plurality of color beams, the color beams received at different locations on the light valve;

turning pixels of the light valve one of on and off according to a received image signal;

adjusting the width of the light beams before the separating so as to minimize light loss; and

controlling a width of the emitted light beams after the separating.

23. (ORIGINAL) The method of claim 22, further comprising collimating the light beams before the separating.

24. (CANCELLED)

25. (CANCELLED)

26. (CURRENTLY AMENDED) A method of projecting an image, comprising:

emitting light beams of different wavelengths;

transmitting the light beams respectively via optical fibers disposed between the light emitting units and a collimating lens;

separating the emitted light beams into a plurality of color beams and scrolling the color beams by rotating an optical element ~~having spirally arranged cylinder cells on a disk~~ arranged so that rotation thereof simulates linear movement of the optical element, the optical element having at least two discrete cylinder lenses spirally arranged to form at least two spiraling cells respectively corresponding to the at least two discrete cylinder lenses on a single disk;

focusing the color beams onto a light valve so as to form color bars corresponding to each of the colors in the plurality of color beams, the color beams received at different locations on the light valve;

turning pixels of the light valve one of on and off according to a received image signal;

adjusting the width of the light beams before the separating so as to minimize light loss; and

controlling a width of the emitted light beams after the separating,

wherein the optical element includes cylindrical lens cells located so as to be in the same positions, when the scrolling is performed at a frequency, as lens cells on a linearly traveling optical element scrolling color beams at the frequency.

27. (CURRENTLY AMENDED) A projector comprising:

a light emitting unit having a plurality of light emitting elements that emit light beams of different wavelengths along a light path;

an optical fibers disposed between the light emitting unit and a collimating lens to respectively transmit the light beams;

a scrolling unit rotatably disposed along the light path and having ~~a plurality of spirally arranged~~at least two discrete cylinder ~~lens cells~~lenses spirally arranged to form at least two spiraling cells respectively corresponding to the at least two discrete cylinder lenses on a single disk that, when the scrolling unit is rotated, separate the light beams into color beams and scroll the color beams;

a light valve disposed at an end of the light path and forming a color image by receiving, at different locations, color beams transmitted from the scrolling unit and turning pixels one of off and on in accordance with an input image signal; and

a light beam width adjusting unit which adjusts the width of the light beams so that a shape of each of the light beams more closely matches the shape of the cylindrical lens cells that without width adjustment.

28. (ORIGINAL) The projector of claim 27, further comprising a collimator disposed along the light path between the light emitting unit and the scrolling unit.

29. (CANCELLED)

30. (PREVIOUSLY PRESENTED) The projector of claim 27, wherein the light beam width adjusting unit includes a first cylinder lens disposed between the light emitting unit and the scrolling unit which controls the width of the light beams and a second cylinder lens disposed between the scrolling unit and the light valve which collimates the color beams.

31-33. (CANCELLED)

34. (CURRENTLY AMENDED) An image projector comprising:

light emitters which emit light beams of different wavelengths;

optical fibers disposed between the light emitters and a collimating lens to respectively transmit the light beams;

a rotatable scrolling unit which separates the emitted light beams into a plurality of color beams~~, having spiral lens cells on a disk,~~ and, when rotated, scrolls the color beams so as to simulate linear movement of the scrolling unit, the scrolling unit having a pair discrete cylindrical lenses spirally arranged to form at least two spiraling cells respectively corresponding to the pair of discrete cylinder lenses on a single disk;

a light valve which turns pixels on and off according to a received image signal; and

a color beam focusing unit which focuses the color beams onto the light valve so as to form color bars corresponding to each of the colors of the plurality of color beams, the color bars received at different locations on the light valve due to the scrolling.